

What is Claimed is:

1. A crawler track tension adjusting device for adjusting tension on a crawler belt of a crawler unit, the device comprising:

(a) a hydraulic actuator which is operated in a direction to increase tension on the crawler belt and in a direction to decrease tension on the crawler belt under the same condition;

(b) an electric motor;

(c) a hydraulic pump actuated by the electric motor; and

(d) operating condition detecting means disposed in a hydraulic circuit which connects the hydraulic pump to the hydraulic actuator, for detecting the operating condition of the hydraulic actuator;

wherein the electric motor is controlled according to a signal from the operating condition detecting means.

2. The crawler track tension adjusting device according to claim 1, wherein the hydraulic actuator is a double rod cylinder comprised of a cylinder, a piston slidable within the cylinder, and a piston rod having portions located at the front and rear ends of the piston respectively.

3. The crawler track tension adjusting device according to claim 2,

wherein the piston rod portion located at the front end projects forwardly from the cylinder and is coupled to a yoke for supporting an idler which the crawler belt encircles, and

wherein the pressure active area of a front pressure chamber located in front of the piston is equal to the pressure active area of a

rear pressure chamber located behind the piston.

4. The crawler track tension adjusting device according to claim 1, wherein the hydraulic pump has an operating oil tank integrally formed therewith.

5. The crawler track tension adjusting device according to claim 1,

wherein an electromagnetic direction selector valve is disposed in an oil line which connects the hydraulic pump to the hydraulic actuator, and a hydraulic sensor is disposed as said operating condition detecting means in an oil line which connects the direction selector valve to the hydraulic actuator, and

wherein in response to a signal from the hydraulic sensor, a controller disposed on the side of a main frame controls the hydraulic pump through the electric motor and controls the direction selector valve.

6. The crawler track tension adjusting device according to claim 5,

wherein the hydraulic circuit including the hydraulic actuator, the direction selector valve and the hydraulic pump has a closed structure in which said parts are all hermetically closed.

7. The crawler track tension adjusting device according to claim 5, wherein the hydraulic pump has an operating oil tank integrally formed therewith.

8. The crawler track tension adjusting device according to claim 5,

wherein a stroke sensor for detecting the position of the

piston rod is so disposed as to face an end of the piston rod, said end being opposite to the end facing the yoke,

wherein a positional signal issued by the stroke sensor is input to the controller.

9. The crawler track tension adjusting device according to claim 1,

wherein said hydraulic pump is a bidirectional pump,

wherein a hydraulic sensor serving as said operating condition detecting means is disposed in an oil line which connects said hydraulic pump to the hydraulic actuator, and

wherein a controller disposed on the side of a main frame controls the hydraulic pump through the electric motor, in response to a signal from the hydraulic sensor.

10. The crawler track tension adjusting device according to any one of claims 1 to 9,

wherein said crawler track tension adjusting device is housed in a casing and two said casings are symmetrically disposed within track frames for respectively supporting crawler units disposed at the right and left of a vehicle.